

**Notice of Allowability**

Application No.

10/783,174

Applicant(s)

RHODES ET AL

Examiner

Art Unit

John S. Chu

1752

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 9/11/07.
2. ☒ The allowed claim(s) is/are 12-17.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

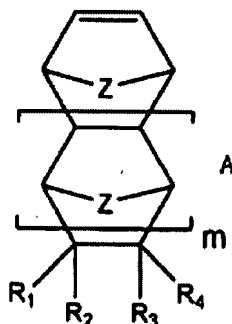
1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

**REASONS FOR ALLOWANCE**

1. The following is an examiner's statement of reasons for allowance: The claimed invention is drawn to the following:

12. (Currently Amended) A method for forming a photoresist composition having a desired dissolution rate comprising:

determining a first exo mole percent of a polycyclic olefin monomer having a fluorinated carbinol pendent group as represented by Formula A:



where  $m$  is an integer from 0 to 5; and  $Z$  represents  $-(CH_2)_p-$ , where  $p$  is equal to 1 or 2; and where at least one of  $R_1$  to  $R_4$  is, independently, a fluorinated carbinol pendent group having from 1 to 20 carbon atoms, each carbon atom, independently, being substituted with 1, 2, or 3 fluorine atoms and where the oxygen atom is protected by a blocking or protective group that is acid cleavable;

forming a first polymer comprising repeating units derived from said polycyclic olefin monomer;

determining a first dissolution rate of said polymer;

modifying the first exo mole percent of said polycyclic olefin monomer to a second exo mole percent greater than or less than the first exo mole percent;

forming a second polymer comprising repeating units derived from the polycyclic olefin monomer having the second exo mole percent; and

formulating the photoresist composition, such composition comprising the second polymer.

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The claimed method for forming a photoresist composition having a desired dissolution rate comprising determining the first exo mole percent of a polycyclic olefin monomer having a fluorinated carbinol pendent group seen above determining a first dissolution rate of said polymer, modifying the first exo mole percent to a second exo mole percent greater than or less than the first exo mole percent, forming a second polymer from said polycyclic olefin monomer and formulating a photoresist composition from said second polymer is seen as allowable over the prior art of record and passed to issue.

The inventive step is the adjusting of the exo mole percent to modify the dissolution rate of the polymer to a desired rate. None of the prior art references disclose the determination of the exo mole percent and adjusting that variable to modify the dissolution rate of the polymer.

Accordingly, claims 12-17 are seen as allowable and passed to issue.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Chu whose telephone number is (571) 272-1329. The examiner can normally be reached on Monday - Friday from 9:30 am to 6:00 pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Cynthia Kelly, can be reached on (571) 272-1526

The fax phone number for the USPTO is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PMR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/John S. Chu/  
Primary Examiner, Group 1700

J.Chu  
September 24, 2007